CLAIMS

1. A receiver comprising:

analog-to-digital circuitry for generating a digital representation of a signal at an input;

adjustable gain control circuitry for receiving a radio signal and outputting an amplified analog signal using a gain determined by a magnitude of the signal at the input of the analog-to-digital circuitry; and

digital channel filtering circuitry for filtering said digital representation; and

digital processing circuitry for processing the output of said digital representation.

2. The receiver of claim 1 wherein said analog-to-digital circuitry generates an output having a plurality of bit values and the gain applied by the adjustable gain control circuitry is determined responsive to one or more of the bit values.

3. The receiver of claim 2 wherein said gain is reduced by a first amount responsive to a most significant of said bit values indicating that the analog-to-digital converter has exceeded a first saturation threshold.

4. The receiver of claim 3 wherein said automatic gain control circuit applies says first gain reduction independent of said digital processing circuitry.

5. The receiver of claim 3 wherein said gain is reduced by a second amount responsive to a set of most significant bits of said bit values indicating that the analog-to-digital converter has exceeded a second saturation threshold.

6. The receiver of claim 2 wherein said gain is increased responsive to a set of most significant bits of said bit values indicating that the analog-to-digital converter is below a threshold.

7. A method of receiving a signal in a receiver, comprising the steps of:

generating a digital representation of a signal at an input of a analog-to-digital converter after applying a gain to the signal;

adjusting the gain responsive to the magnitude of the digital representation;

generating a filtered digital representation for a desired channel; and

processing the filtered digital representation.

8. The method of claim 7 and wherein said adjusting step comprises the step of adjusting the gain responsive to one or more bit values of said digital representation.

9. The method of claim 8 wherein said adjusting step includes the step of adjusting the gain by a first predetermined amount responsive to the value of a most significant bit of said bit values.

10. The method of claim 9 wherein said adjusting step includes the step of adjusting the gain by a second predetermined amount responsive to a set of most significant bits of said bit values.